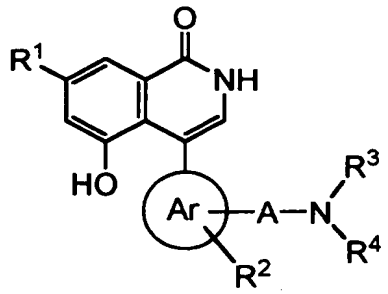
SCOPE OF THE CLAIM

1. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives represented by a general formula (1)



(1)

[wherein ring Ar denotes a phenyl group, naphthyl group, 5- or 6-membered heterocycle and its condensed ring, R^1 denotes a hydrogen atom or halogen atom, R^2 denotes a hydrogen atom, halogen atom, hydroxy group, lower alkyl group which may be substituted with halogen atom, cycloalkyl group which may be substituted with halogen atom, lower alkoxy group which may be substituted with halogen atom, aralkyloxy group which may have substituents, nitro group, amino group which may have substituents, aralkyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5-or 6-membered heterocycle which may have substituents and its condensed ring, A denotes a C_1~C_4 alkylene or C_2~C_4 alkenylene, R^3 denotes a hydrogen atom, lower alkyl group which may be substituted with halogen atom, or general formula (2)

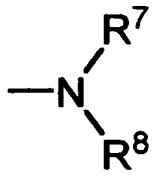
$$—Q^1—R^5 \qquad (2)$$

(wherein Q^1 denotes a C_1~C_4 alkylene, and R^5 denotes a hydroxy group, lower alkoxy group which may be substituted with halogen atom, amino

group which may have substituents, lower alkoxycarbonyl group or carboxy group), R^4 denotes a lower alkyl group which may be substituted with halogen atom, cycloalkyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring, general formula (3)

$$—Q^2—R^6 \qquad (3)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^6 denotes a hydroxy group, lower alkoxy group which may be substituted with halogen atom, lower alkoxycarbonyl group, carboxy group, cycloalkyl group which may have substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring), or general formula (4)

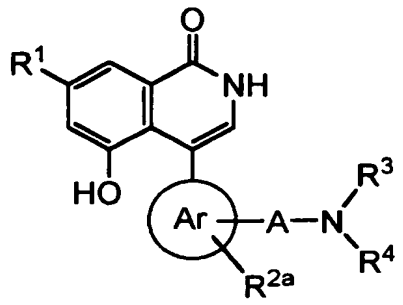


(4)

(wherein R^7 and R^8 denote identically or differently hydrogen atoms, lower alkyl groups which may be substituted with halogenatom, aralkyl groups which may have substituents, or R^7 and R^8 are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring), or R^3 with R^4 are bound together to form a 5- or 6-membered heterocycle which may have substituents and its

condensed ring],and their pharmacologically acceptable addition salts.

2. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1a)



(1a)

[wherein ring Ar denotes a phenyl group, naphthyl group, 5- or 6-membered heterocycle and its condensed ring, R^1 denotes a hydrogen atom or halogen atom, R^{2a} denotes a hydrogen atom, halogen atom, hydroxy group, lower alkyl group which may be substituted with halogen atom, lower alkoxy group which may be substituted with halogen atom, nitro group, or amino group which may have substituents, A denotes a C_1~C_4 alkylene or C_2~C_4 alkenylene, R^3 denotes a hydrogen atom, lower alkyl group which may be substituted with halogen atom, or general formula (2)

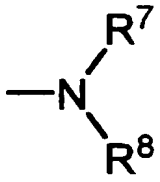
$$-Q^1-R^5 \qquad (2)$$

(wherein Q^1 denotes a C_1~C_4 alkylene, and R^5 denotes a hydroxy group, lower alkoxy group which may be substituted with halogen atom, amino group which may have substituents, lower alkoxycarbonyl group or

carboxy group), R^4 denotes a lower alkyl group which may be substituted with halogen atom, cycloalkyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring, general formula (3)

$$—Q^2–R^6 \qquad (3)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^6 denotes a hydroxy group, lower alkoxy group which may be substituted with halogen atom, lower alkoxycarbonyl group, carboxy group, cycloalkyl group which may have substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring), or general formula (4)

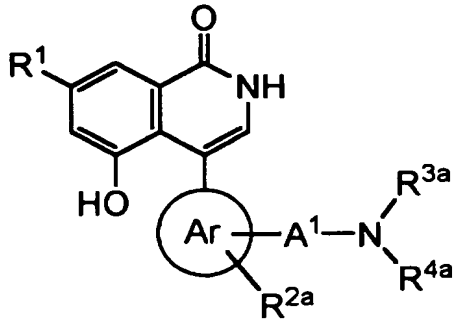


(4)

(wherein R^7 and R^8 denote identically or differently hydrogen atoms, lower alkyl groups which may be substituted with halogenatom, aralkyl groups which may have substituents, or R^7 and R^8 are bound together to form a 5- or 6- membered heterocycle whichmay have substituents and its condensed ring), or R^3 and R^4 are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring],and their pharmacologically acceptable addition

salts.

3. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1b)



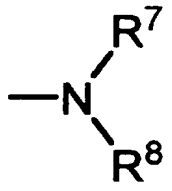
(1b)

[wherein ring Ar denotes a phenyl group, naphthyl group, 5- or 6-membered heterocycle and its condensed ring, R^1 denotes a hydrogen atom or halogen atom, R^{2a} denotes a hydrogen atom, halogen atom, hydroxy group, lower alkyl group which may be substituted with halogen atom, lower alkoxy group which may be substituted with halogen atom, nitro group, or amino group which may have substituents, A^1 denotes a C_1~C_4 alkylene, R^{3a} denotes a hydrogen atom or lower alkyl group which may be substituted with halogen atom, R^{4a} denotes a lower alkyl group which may be substituted with halogen atom, cycloalkyl group which may have substituents, general formula (3)

$$-Q^2-R^6 \qquad (3)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^6 denotes a hydroxy group, lower alkoxy group which may be substituted with halogen atom, lower alkoxycarbonyl group, carboxy group, cycloalkyl group which may have

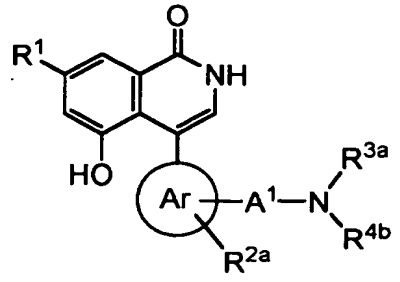
substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring), or general formula (4)



(4)

(wherein R^7 and R^8 denote identically or differently hydrogen atoms, lower alkyl groups which may be substituted with halogenatom, aralkyl groups which may have substituents, or R^7 and R^8 are bound together to form a 5- or 6- membered heterocycle whichmay have substituents and its condensed ring), or R^{3a} and R^{4a} are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring],and their pharmacologically acceptable addition salts.

4. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1c)



(1c)

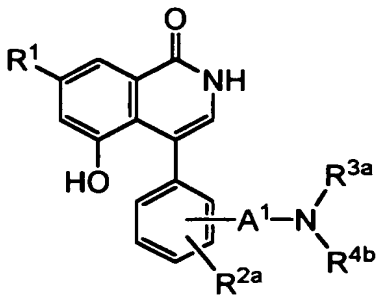
[wherein ring Ar denotes a phenyl group, naphthyl group, 5- or

6-membered heterocycle and its condensed ring, R^1 denotes a hydrogen atom or halogen atom, R^{2a} denotes a hydrogen atom, halogen atom, hydroxy group, lower alkyl group which may be substituted with halogen atom, lower alkoxy group which may be substituted with halogen atom, nitro group, or amino group which may have substituents, A^1 denotes a C_1~C_4 alkylene, R^{3a} denotes a hydrogen atom or lower alkyl group which may be substituted with halogen atom, R^{4b} denotes a lower alkyl group which may be substituted with halogen atom, or general formula (3a)

$$-Q^2-R^{6a} \qquad (3a)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^{6a} denotes a cycloalkyl group which may have substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring), or R^{3a} and R^{4b} are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring], and their pharmacologically acceptable addition salts.

5. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1d)



(1d)

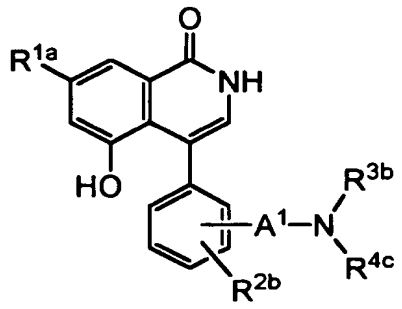
[wherein R^1 denotes a hydrogen atom or halogen atom, R^{2a} denotes a hydrogen atom, halogen atom, hydroxy group, lower alkyl group which may be substituted with halogen atom, lower alkoxy group which may be substituted with halogen atom, nitro group, or amino group which may have substituents, A^1 denotes a C_1~C_4 alkylene, R^{3a} denotes a hydrogen atom or lower alkyl group which may be substituted with halogen atom, R^{4b} denotes a lower alkyl group which may be substituted with halogen atom, or general formula (3a)

$$-Q^2-R^{6a} \qquad (3a)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^{6a} denotes a cycloalkyl group which may have substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring), or R^{3a} and R^{4b} are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring], and their pharmacologically acceptable addition salts.

6. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim

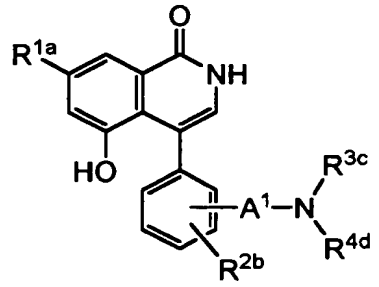
1, represented by a general formula (1e)



(1e)

[wherein R^{1a} denotes a hydrogen atom, R^{2b} denotes a hydrogen atom, A^1 denotes a C_1~C_4 alkylene, and R^{3b} and R^{4c} are bound together to form a 5- or 6-membered heterocycle which may have substituents and its condensed ring], and their pharmacologically acceptable addition salts.

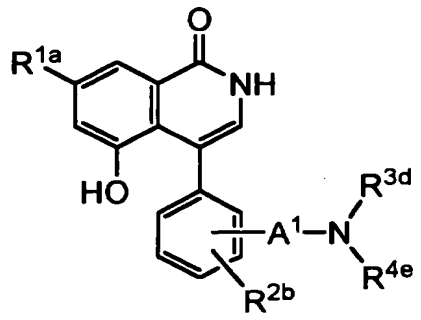
7. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1f)



(1f)

[wherein R^{1a} denotes a hydrogen atom, R^{2b} denotes a hydrogen atom, A^1 denotes a C_1~C_4 alkylene, R^{3c} denotes a lower alkyl group which may be substituted with halogen atom, and R^{4d} denotes a lower alkyl group which may be substituted with halogen atom], and their pharmacologically acceptable addition salts.

8. 4-Substituted aryl-5-hydroxyisoquinolinone derivatives of Claim 1, represented by a general formula (1g)



(1g)

[wherein R^{1a} denotes a hydrogen atom, R^{2b} denotes a hydrogen atom, A^1 denotes a C_1~C_4 alkylene, R^{3d} denotes a hydrogen atom or lower alkyl group which may be substituted with halogen atom, R^{4e} denotes general formula (3a)

$$-Q^2-R^{6a} \qquad (3a)$$

(wherein Q^2 denotes a C_1~C_4 alkylene, and R^{6a} denotes a cycloalkyl group which may have substituents, cycloalkenyl group which may have substituents, phenyl group which may have substituents, naphthyl group which may have substituents, or 5- or 6-membered heterocycle which may have substituents and its condensed ring)], and their pharmacologically acceptable addition salts.

9. Compounds of Claim 1, wherein the compounds represented by said general formula (1) are 1,2-dihydro-4-[4-(dimethylaminomethyl) phenyl]-5-hydroxy-1-oxoisoquinoline,
1,2-dihydro-5-hydroxy-4-[4-[(N-methylbenzylamino)methyl]phenyl] -1-oxoisoquinoline,

1,2-dihydro-5-hydroxy-4-[4-[(N-methyl-2-phenylethylamino) methyl] phenyl]-1-oxoisoquinoline, 1,2- dihydro-5-hydroxy-4 -[4-[(N-methyl-3-phenylpropylamino)methyl]phenyl]-1-oxoisoquinoline,1,2-dihydro-5-hydroxy-4-[4-[(N-methylcyclohexylmethylamino) methyl]phenyl]-1-oxoisoquinoline, 1,2-dihydro-5-hydroxy-1-oxo-4-[4-[(pyrrolidin-1-yl)methyl] phenyl]isoquinoline and 1,2-dihydro-5-hydroxy-1-oxo-4-[4-[(4-phenyl-1,2,3,6-tetrahydropyridin-1-yl)methyl]phenyl] isoquinoline.

10. An inhibitor of poly (ADP-ribose)synthetase, characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of claims 1 through 9 as effective ingredients.

11. A medicinal drug, characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of Claims 1 through 9 as effective ingredients.

12. A preventive and/or therapeutic drug for the ischemic diseases (cerebral infarction, cardiac infarction, acute renal failure, etc.), characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of Claims 1 through

9 as effective ingredients.

13. A preventive and/or therapeutic drug for the inflammatory diseases (inflammatory bowel disease, multiple cerebrosclerosis, arthritis, chronic rheumatism, etc.), characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of Claims 1 through 9 as effective ingredients.

14. A preventive and/or therapeutic drug for the neurodegenerative diseases (Alzheimer's disease, Huntington's chorea, Parkinson disease, etc.), characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinonederivatives and their pharmacologically acceptable addition salts of any of Claims 1 through 9 as effective ingredients.

15. A preventive and/or therapeutic drug for the diabetes and its complications, characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of Claims 1 through 9 as effective ingredients.

16. A therapeutic drug for the brain trauma, characterized by containing one or more kinds of 4-substituted aryl-5-hydroxyisoquinolinone derivatives and their pharmacologically acceptable addition salts of any of claims 1 through 9 as effective

ingredients.